

WHAT IS CLAIMED IS:

1. A multi-layered composite comprising in sequence a first polymeric layer, a metal layer, a water or solvent-based or hot-melt adhesive layer and a second polymeric layer, the polymeric layer in both 5 instances having thicknesses independent one of the other of 25 to 1,000 microns, and the metal layer containing at least one member selected from the group consisting of titanium, aluminum, copper, silver, chromium, zirconium, tin, indium and their alloys.
- 10 2. The multi-layered composite of Claim 1 wherein the metal layer comprises indium.
- 15 3. The multi-layered composite of Claim 2 wherein the metal layer comprises indium-tin alloy that contains tin in a positive amount up to 95 wt.%.
- 20 4. The multi-layered composite of Claim 3 wherein the alloy contains indium in an amount of up to 95 wt.%.
- 25 5. The multi-layered composite of Claim 1 wherein the first polymeric layer contains at least one member selected from the group consisting of polycarbonate, polyester, polyacrylate, acrylonitrile-butadiene-styrene copolymer, polyamide, polyolefin, polyurethane, polyamide, polyimide and fluoropolymer.
- 30 6. The multi-layered composite of Claim 1 wherein the second polymeric layer contains at least one member selected from the group consisting of polycarbonate, polyester, polyacrylate, acrylonitrile-butadiene-styrene copolymer, polyamide, polyolefin, polyurethane, polyamide, polyimide and fluoropolymer.

7. The multi-layered composite of Claim 1 wherein the first polymeric layer and the second polymeric layer are compositionally different one from the other.

5 8. The multi-layered composite of Claim 1 wherein the first polymeric layer and the second polymeric layer are compositionally identical.

9. The multi-layered composite of Claim 1 wherein the first 10 polymeric layer comprises polycarbonate.

10. The multi-layered composite of Claim 1 wherein the second polymeric layer comprises polycarbonate.

15 11. The multi-layered composite of Claim 9 wherein the both surfaces of the polycarbonate layer are glossy.

12. The multi-layered composite of Claim 10 wherein surface of the second polycarbonate layer in contact with the adhesive layer is 20 glossy.

13. The multi-layered composite of Claim 12 wherein the second surface of the second polycarbonate layer is matte.

25 14. The multi-layered composite of Claim 1 wherein the adhesive layer comprises a water-based adhesive.

15. The multi-layered composite of Claim 1 wherein the adhesive layer comprises a solvent-based adhesive.

16. The multi-layered composite of Claim 1 wherein the adhesive layer comprises a hot-melt adhesive.

17. The multi-layered composite of Claim 1 wherein the adhesive 5 layer comprises an aqueous anionic dispersions of high molecular weight polyurethane.

18. The multi-layered composite of Claim 17 wherein the dispersion contains solid polymer in an amount of 10 to 80 wt.% and has a 10 viscosity value in the range of 20 to 2000 cps.

19. A thermoplastically molded article comprising at least one polymeric resin selected from a group consisting of polycarbonate, acrylonitrile-butadiene-styrene copolymer, polyester and polyamide resins 15 characterized in that to at least a portion of its surface there is bonded by film insert molding technique a formed multi-layered polymer composite comprising in sequence a first polymeric layer, a metal layer, a water or solvent-based crystalline adhesive layer and a second polymeric layer, the polymeric layers, in both instances, have thicknesses independent one of 20 the other of 25 to 1,000 microns, and the metal layer contains at least one member selected from the group consisting of titanium, aluminum, copper, silver, chromium, zirconium, tin, indium and their alloys.

20. The molded article of Claim 19 wherein said polymeric resin 25 is polycarbonate.

21. The molded article of Claim 19 wherein said first polymeric layer is polycarbonate.

30 22. The molded article of Claim 19 wherein said second polymeric layer is polycarbonate.

23. The molded article of Claim 19 wherein said first polymeric layer and second polymeric layer are polycarbonate.

5 24. The molded article of Claim 19 wherein the metal layer comprises indium-tin alloy that contains tin in a positive amount up to 95 wt.%.

10 25. The molded article of Claim 19 wherein the adhesive layer comprises an aqueous anionic dispersion of high molecular weight polyurethane.

26. The molded article of Claim 19 wherein the adhesive layer comprises an aqueous anionic dispersion of high molecular weight amorphous polyurethane.

15 27. The molded article of Claim 26 wherein the dispersion contains solid polymer in an amount of 10 to 80 wt.% and has a viscosity value in the range of 20 to 2000 cps.